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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,048	03/23/2004	Sung-Kee Kim	5000-1-548	2705

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EXAMINER

JEANGLAUDE, JEAN BRUNER

ART UNIT PAPER NUMBER

2819

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,048

Applicant(s)

KIM ET AL.

Examiner

Jean B. Jeanglaude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 5-11-06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,16,17,18,19 is/are rejected.
- 7) ☒ Claim(s) 3-12 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Response To Amendments/Arguments

1. Applicant's arguments with respect to claims 1 – 12, 16 - 20 have been considered but are moot in view of the new ground(s) of rejection.
2. The withdrawn claims must be canceled.

DETAILED ACTION

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1, 2, 16, 17, 18, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Dimmick et al. (US Patent Number 6,623,188).
5. Regarding claim 16, Dimmick et al. discloses an optical duo-binary transmission apparatus (figs. 5, 10) comprising a precoder (402) configured to code in parallel data input signals of N channels (406) ; and a multiplexer (404) configured to time division multiplex the signals coded by the precoder (figs. 5, 10) [col. 2, lines 56 – 67].
6. Regarding claim 17, Dimmick et al. discloses an optical duo-binary transmission apparatus (figs. 5, 10) , wherein the precoder (fig. 6) comprises: a judgment unit (the exclusive OR)[470] configured to judge whether an odd number or even number of '1's exist in data input signals of N channels inputted at an nth time of channel input (figs. 5,

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6, 10) ; a toggle unit (the Flip-flop)[472] configured to toggle an output signal of the judgment unit when said number of `1`s is judged by the judgment unit to be odd, the toggle unit (472) determining an output value of a channel of the N channels (figs. 5, 6, 10) [the clocking pulse causes the out of the flip flop to toggle]; and communicatively connected to the toggle unit, an output unit for determining output values of other channels of the N channels according to respective ones of the data input signals (figs. 5, 6, 10)[the clocking pulse causes the out of the flip flop to toggle].

7. Regarding claims 18, 19, Dimmick et al. discloses an optical duo-binary transmission apparatus (figs. 5, 10) wherein the precoder (402) further comprises a unit ($d_0, d_1, \dots, d_{(w-1)}$) to which the data input signals serve as input, said unit being comprised of m stages of XOR gates wherein $N = 2^m$ (fig. 6 shows the structure of the precoder which includes exclusive OR gates).

8. Regarding claim 1, Dimmick et al. discloses an optical duo-binary transmission apparatus (figs. 5, 10) , wherein the precoder (fig. 6) comprises: a judgment unit (the exclusive OR)[470] configured to judge whether an odd number or even number of `1`s exist in data input signals of N channels inputted at an nth time of channel input (figs. 5, 6, 10) ; a toggle unit (the Flip-flop)[472] configured to toggle an output signal of the judgment unit when said number of `1`s is judged by the judgment unit to be odd, the toggle unit (472) determining an output value of a channel of the N channels (figs. 5, 6, 10) [the clocking pulse causes the out of the flip flop to toggle]; and communicatively connected to the toggle unit, an output unit for determining output values of other

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channels of the N channels according to respective ones of the data input signals (figs. 5, 6, 10)[the clocking pulse causes the out of the flip flop to toggle].

9. Regarding claim 2, Dimmick et al. discloses a precoder (figs. 5, 10) wherein the judgment unit (fig. 6) includes a plurality of exclusive OR gates (472) connected to each other in a pyramid configuration, so that the judgment unit outputs to the toggle unit '0' when said number of '1's is judged by the judgment unit to be even, or '1' when said number of '1's is judged by the judgment unit to be odd (fig. 6).

Allowable Subject Matter

10. Claims 3 – 12, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jean Bruner Jeanglaude
Primary Examiner
July 6, 2006